

THE SPROUTING UMBRELLA

The Sprouting Umbrella is being submitted for a utility patent by the co-creators:

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CROSS-REFERENCE TO RELATED APPLICATIONS

Not Applicable

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not Applicable

REFERENCE TO SEQUENCE LISTING, A TABLE, OR A COMPUTER PROGRAM LISTING COMPACT DISK APPENDIX

Not Applicable

BACKGROUND OF THE INVENTION

This invention relates to the umbrella field of invention, and is an improvement to the functionality and usefulness of the typical folding umbrella. The typical folding umbrella makes use of multiple ribs and struts attached to its

canopy to fold and unfold the canopy. A problem with this design is that it forces the canopy to open widely at the bottom, in a concave fashion. When exiting or entering a vehicle, this design allows large amounts of rain to reach the user.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

Figure 1 shows the main parts of the channeled shaft. Figure 1 illustrates the bottom static ring, which locks the dynamic ring in the down (unopened) position. The dynamic ring is attached to the spokes through the channels of the shaft. The dynamic ring is used to push the spokes through the channels and up through the top of the static ring, to open the canopy of “The Sprouting Umbrella. The top static ring has holes in the top, which are aligned with the channels on the shaft. This allows the spokes to slide into the sleeves of the canopy causing it to open.

Figure 2 shows the main parts of the canopy. The canopy fabric is attached to multiple sleeves, so as to let the spokes extend through. The sleeves are sewn so that the central sides of the sleeves are open. The outer sides of the sleeves are closed and reinforced to limit extension of the spoke and bend the spoke when opening “The Sprouting Umbrella.”

Figure 3 shows a side view of “The Sprouting Umbrella” in the open position, with the dynamic ring in the up position. Item “A” shows the governing strips, which limit the extension of the sleeves, and force the spoke to bend while the umbrella is in the up position. Item “B” shows the spokes extended through the sleeves and bent. When the umbrella is open, the dynamic ring will be in the

up position; spokes will be bent and governing strips fully extended. The bending of the spokes inside the sleeves is what actually stretches the canopy and creates the curvature of the canopy.

Figure 4 shows another side view of “The Sprouting Umbrella” in the closed position, with the dynamic ring in the down position. Item “D” shows the governing strips hanging loose down the shaft. Item “E” shows the canopy also hanging loose down the shaft.

DETAILED DESCRIPTION OF THE INVENTION

This invention is different in the way it is opened and closed, and in the design of the structure itself. All previous umbrellas open concavely or are folded which can create quite an amount of space utilization when trying to open and close the umbrella. When entering or exiting a vehicle these designs can be cumbersome and allow large amounts of rain to reach the user. With “The Sprouting Umbrella” the canopy opens and closes closer to the shaft and is much less cumbersome. It is envisioned that “The Sprouting Umbrella’s” user will be able to open his/her vehicle door about three inches (allowing very little rain to enter the vehicle), push “The Sprouting Umbrella” through the gap in the door, open it, and exit the vehicle dryer than normal. Conversely, when entering the user’s vehicle, he/she will keep “The Sprouting Umbrella” open, unlock and open the door, enter the vehicle, close the door (leaving the door open about three inches), close “The Sprouting Umbrella,” retract it into the vehicle and shut the door; remaining much dryer.

To construct “The Sprouting Umbrella” one must first have a shaft. The shaft needs to have channels in it so the spokes may fit inside the channels. Additionally, the channels must be open to the outside, because spokes will be attached to the dynamic ring that slides along the outside of the shaft. The spokes must be made of a material that is bendable and durable to handle constant opening and closing. Notice in Figure 1 how the spokes are contained inside the shaft while unopened, and the channels are visible so as to let the dynamic ring slide freely up and down the shaft while opening and closing “The Sprouting Umbrella.” To assemble the structure, the shaft must be created first. The bottom static ring can then be attached securely to the shaft. Next, multiple spokes must be attached to the dynamic ring. The dynamic ring, with the spokes attached, will then be slid into the shaft via the channels. There is also a top static ring, which must then be attached to the top of the shaft. The top static ring is different than the bottom static ring. The top static ring has holes in the top of the ring, which align with the channels so as to let the spokes slide freely from the channels, through the top static ring, and into the sleeves of the canopy. Additionally, the top static ring has smaller holes surrounding the original holes for the channels, to let the canopy sleeves be sewn on.

After the parts of the shaft are assembled, the canopy must be fabricated. The canopy will be shaped in an equilateral, polygon design; which polygon depends on the number of spokes that are in the shaft. The material of the canopy must be a nylon-type material that can move fluidly, be durable, and water-resistant. Sleeves must be constructed of the same material as the canopy